1882MNRAS..42..351G

On the Spectrum of Comet a, 1882 *(Wells), observed at the Royal Observatory, Greenwich.*

(Communicated by the Astronomer Royal.)

The spectrum of this object was first examined on the evening of April 22, with the Single-prism spectroscope. No bright bands could be detected, but a continuous spectrum was traced from about λ 5900 to λ 4900. This spectrum was very fairly bright from the star-like nucleus, and a faint spectrum could also be perceived some little distance down the tail.

The comet was observed again with the same instrument on April 24, when the continuous spectrum was traced from about λ 6000 to λ 4400. This spectrum was not equally bright throughout, there being two ill-defined maxima in the green and greenish-blue, but no bright bands could be made out.

On May 11 the "Half-prism" spectroscope was employed, with one half-prism, reversed as in the observations of prominences, so as to give great purity of spectrum. No bright bands could be seen, nor any irregularities of brightness or break of continuity detected in the continuous spectrum which was traced from about λ 6000 to about λ 4700. The continuous spectrum seemed remarkably bright from the nucleus, considering the comparative faintness of the comet, and the high dispersion used, viz. 5° from A to H, the magnifying power being 28. The observations were made by Mr. Maunder throughout.

Royal Observatory, Greenwich:
1882, *May* 12.

Elements of the Orbit of Comet Wells. By A. Graham, Esq.

(Communicated by Professor Adams.)

From the following observations of the Comet Wells, made at this Observatory with the Northumberland Equatoreal and square-bar Micrometer, under favourable conditions, after carefully correcting for aberration and parallax, I have obtained parabolic elements of the orbit, which may be of some value in tracing its course until better elements are forthcoming.

Observed places:—

	G.M.T.	R.A.	N. Declination.
		h m s	° ′ ″
1882, April	5·42729	18 26 49·06	44 0 58·3
	14·42002	18 51 32·80	51 32 15·1
	22·42595	19 24 55·81	59 21 17·6
	·45297	25 4·09	22 59·9

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Elements of orbit:—

$$T = 1882,\ \text{June } 10{\cdot}58295,\ \text{G.M.T.}$$

$$\left.\begin{array}{l} \pi = 53^\circ\ 53'\ 48''{\cdot}2 \\ \Omega = 205\ \ 2\ \ 0{\cdot}8 \end{array}\right\} \text{Mean Equinox } 1882{\cdot}0.$$

$$i = 73\ \ 52\ \ 54{\cdot}6$$

$$\log q = 8{\cdot}7882c3. \quad \text{Motion direct.}$$

Comparison with middle place (C—O):—

$$\Delta L \cos l = 3''{\cdot}4 \qquad \Delta l = -0''{\cdot}3.$$

Heliocentric equatoreal coordinates, referred to apparent equinox and obliquity, April 1:—

$$x = [9{\cdot}9607526]\ r \sin (126^\circ\ 15'\ 11''{\cdot}2 + v)$$

$$y = [9{\cdot}8607709]\ r \sin (\ 61\ \ 12\ \ 38{\cdot}4 + v)$$

$$z = [9{\cdot}9026397]\ r \sin (196\ \ 41\ \ 38{\cdot}6 + v).$$

where r = radius vector, and v = true anomaly of the comet.

Satisfactory comparisons with the star numbered 6093 in the Radcliffe Catalogue for 1845 were obtained on May 10. These give for the correction of the Ephemeris deduced from the above elements

$$\Delta\alpha \,.\, \cos\delta = +4^{s}{\cdot}36\,; \qquad \Delta\delta = -1''{\cdot}2.$$

Cambridge Observatory:
1882, *May* 11.

An Examination of the Roorkee Observations of the Transit of Venus, 1874, *December* 8. By Col. J. F. Tennant, R.E., F.R.S.

It was proposed by Sir George Airy that the observations of this transit should be reduced, so that the results of observations should be shown in the form of equations of condition, their further discussion being left to be taken up by some person in whom there should be general confidence after the whole had been so reduced. In accordance with these views I was instructed by the Government of India to reduce my observations in this manner, and the results of these were published in 1877 in a Report which has, I believe, been largely distributed through the Royal Observatory.

Since that time a Parliamentary Paper was issued in which the contact observations made by the observers whose expenses were defrayed from the Parliamentary Grants were compared and a value of the solar parallax deduced. Colonel Tupman then, in a Paper published in the *Monthly Notices*, vol. xxxviii., discussed these, with the addition of a number of observations by British observers, among which were those I had made at

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